CLASS 295, RAILWAY WHEELS AND AXLES

SECTION I - CLASS DEFINITION

Contains load carrying and traction wheels designed for use on railway-track, axles for such wheels, and means for securing such wheels and axles together. In the case of mine-car axles the brackets or bearings for securing the axles directly to the car-bottom without a truck-frame are included in this class.

SECTION II - LINES WITH OTHER CLASSES AND WITHIN THIS CLASS

For wheels for panel hangers and travelers see Class 16, Miscellaneous Hardware, subclass 107.

See Class 492, Rolls and Rollers, for rolls and rollers per se, not elsewhere provided for, and see the Notes thereto for other rolls.

SUBCLASSES

1 This subclass is indented under the class definition. Arrangement and construction of railway-vehicle wheels not otherwise classified below.

2 This subclass is indented under subclass 1. Locomotive drive-wheels embodying specific crank-pin construction or arrangement.

3 This subclass is indented under subclass 1. Railway-vehicle wheels comprising an inner and an outer-rotating element eccentrically arranged, the inner element supporting the axle and weight of the load upon the outer element and the outer element being adapted to run on the track-rails.

4 This subclass is indented under subclass 1. Railway-vehicle wheels the peripheries of which are provided with projecting spurs cooperating with rack-bars arranged along the trackway.

5 This subclass is indented under subclass 1. Railway-vehicle wheels having a gear-wheel rigidly attached to one side thereof, whereby the motive force is transmitted directly to the driving wheels.

6 This subclass is indented under subclass 1. Locomotive drive-wheels provided with weighted means for overcoming the disturbing action of the reciprocating parts and eliminating the so-called “hammer- blow” on the rails.

7 This subclass is indented under subclass 1. Devices for deadening or damping the noise on car-wheels.

SEE OR SEARCH CLASS:
181, Acoustics, subclass 207 for devices for deadening mechanical vibrating structure.

8 This subclass is indented under subclass 1. Railway-vehicle wheels consisting of concentric cast portions, either a rim or tire having a body portion cast therein or a hub having a rim or web portion cast thereon.

8.5 This subclass is indented under subclass 1. Includes means for changing the wheel-tread so as to adapt it for running on a roadway or a railway, generally by providing a removable rim or tread.

SEE OR SEARCH THIS CLASS, SUBCLASS:
9.2, for a wheel having a flange moveable for road use.

9.1 Moveable flange:
This subclass is indented under subclass 1. Device comprising a railway-vehicle wheel protruding edge surface which holds the wheel laterally in position on a railway track. The protruding edge surface comprise or is carried by structure facilitating movement of the edge surface relative to the wheel.

(1) Note. The movement may be radial, axial, or revoluble.

9.2 Moveable for road use:
This subclass is indented under subclass 9.1. Device wherein the relative movement between the edge surface and the wheel is intended to enable operation of the wheel on a level, nonrail surface such as a road.

(1) Note. The flange usually retracts within the diameter of the wheel or yields to

permit operation on a level, nonrail surface.

(2) Note. Flanges which yield to permit a wheel to more easily cross an obstruction are not included in this subclass unless operation on a level, nonrail surface such as a road is specified.

SEE OR SEARCH THIS CLASS, SUBCLASS:
8.5, for wheels convertible between roads and rail use by means other than a moveable flange.

10 This subclass is indented under subclass 1. Railway-vehicle wheels adapted for revolution independent of the car-axle by means of an outer section or tire loosely mounted on the wheel hub or body.

11 This subclass is indented under subclass 1. Railway-vehicle wheels not classified below in which a cushion or filler of some elastic material as rubber, paper, or leather--is inserted between the rim or tire and the wheel body or hub.

(1) Note. For similar devices for use with land vehicles, see Class 152, Resilient Tires and Wheels.

12 This subclass is indented under subclass 11. Railway-vehicle wheels having pneumatic devices for supporting the wheel-tread portions.

SEE OR SEARCH THIS CLASS, SUBCLASS:
30.1, for pneumatic tire wheels.

SEE OR SEARCH CLASS:
492, Roll or Roller, subclasses 4+ for a roll, per se, not elsewhere provided for, having an inflatable chamber.

13 This subclass is indented under subclass 11. Railway-vehicle wheels having wooden blocks for supporting the wheel-tread portions.

14 This subclass is indented under subclass 11. Railway-vehicle wheels in which the cushioning effect is produced by interposing metallic springs between the rim or tire and the wheel body or hub.

SEE OR SEARCH CLASS:
492, Roll or Roller, subclass 42 for a roll, per se, not elsewhere provided for, having leaf or coil spring member.

15 This subclass is indented under subclass 1. Railway-vehicle wheels having the tires or rims and the body of the wheels formed separately and specific means not otherwise classified below for securing the tires and the bodies of the wheels together.

16 This subclass is indented under subclass 15. Railway-vehicle wheels having the tires or rims fastened to the wheel-body by welding.

17 This subclass is indented under subclass 15. Railway-vehicle wheels having the tires or rims and the body of the wheels formed separately and secured together by mean of an interposed filling of cast metal.

18 This subclass is indented under subclass 15. Railway-vehicle wheels having the tires or rims and the body of the wheels formed separately and secured together solely of means of lugs formed integral with one member and engaging recesses or integral lugs on the other member in interlocking relation.

19 This subclass is indented under subclass 15. Railway-vehicle wheels having the tires or rims and the body of the wheels formed separately and secured together by means by keys passing transversely between and recessed in the tire and wheel body at intervals around the circumference thereof.

20 This subclass is indented under subclass 15. Railway-vehicle wheels having the tires or rims and the body of the wheels formed separately and secured together by bolts passed through the overlapped flanges of both members.

21 This subclass is indented under subclass 1. Railway-vehicle wheels embodying specific web construction not otherwise classified below. Includes wooden and split casting web construction.

22 This subclass is indented under subclass 21. Railway-vehicle wheels in which the tires or rims and hub are connected by a web portion composed of one or more sheet-metal disks and not otherwise classified below.

23 This subclass is indented under subclass 22. Same as ... except that there is a plurality of disks, with a filler therebetween.

24 This subclass is indented under subclass 22. Railway-vehicle wheels in which the tire or rim is formed integral with the web, being pressed from a single sheet of metal.

25 This subclass is indented under subclass 1. Railway-vehicle wheels having the rims or tires and the wheel-hub formed separately and connected by a series of spokes and not otherwise classified below. Includes wooden and metallic detachable spokes.

26 This subclass is indented under subclass 25. Railway-vehicle wheels having the spokes secured in the wheel by casting the hub or rim, or both, around the ends of the spokes.

27 This subclass is indented under subclass 1. Railway-vehicle wheels having the hub, web, and tire cast in one piece and not otherwise classified.

28 This subclass is indented under subclass 27. Same as ... except that the webs are cast hollow.

29 This subclass is indented under subclass 1. Wrought-metal car-wheels produced by some forging operation, as roll, hammer, or die forging.

30 This subclass is indented under subclass 1. Railway-car wheels claimed significantly as to wheel structure and formed from a composition metal or entirely from a single metal, but treated so as to have different physical properties in the different parts of the wheels, such as chill-hardened rims or hubs.

(1) Note. Where the wheel is claimed with no significant wheel structure but merely in terms of the composition or material of which it is composed, it will be classified in the appropriate composition or material class even though there is no claim to the composition or material, per se. In this connection the classes under the Search Class notes below should be considered

SEE OR SEARCH CLASS:

148, Metal Treatment, particularly subclass 569 and 581+ for processes of metal casting,fusion bonding, machining, or working combined with significant heat treatment of railway wheels and axles to modify or maintain the internal physical structure (i.e., microstructure) or chemical property of metal. See the Class 148 definition to determine what constitutes significant heat treatment. Without metal casting, fusion bonding, ma-chining, or working, Class 148 will take any heat treatment to modify or maintain the internal physical structure (i.e., microstructure) or chemical property of metal.

420, Alloys or Metallic Compositions, for articles defined solely by their metal or alloy composition.

428, Stock Material or Miscellaneous Articles, subclasses 544+ for wheels made of metal which are so broadly claimed as to be merely stock material, especially subclasses 615+ for plural-layered metallic stock defined in terms of the composition of its components.

30.1 Pneumatic tire wheel:

This subclass is indented under subclass 1. Device wherein the railway-vehicle wheel has a covering about its periphery which covering rides directly on the railway track (i.e., a tire) and it inflated with air under pressure.

(1) Note. Subject matter pertaining to a pneumatic tire cushion for a railway-vehicle wheel is not included in this subclass.

SEE OR SEARCH THIS CLASS, SUBCLASS:

12, for pneumatic devices for supporting railway vehicle wheel tread portions, wherein the pneumatic devices are

inserted between the rim or tire and the wheel body or hub.

31.1 Wheel tread:
This subclass is indented under subclass 1. Device having particular construction of a peripheral tread surface to the railway-vehicle wheel, which surface rides on the railway track.

SEE OR SEARCH THIS CLASS, SUBCLASS:
30.1, for particular wheel tread construction of a pneumatic tire railway-vehicle wheel.

32 This subclass is indented under subclass 31.1. Railway-car running-gear in which the weight of the car is sustained by roller-bearings. Includes roller-trucks in which a plurality of roller-bearings or wheels linked together form one flexible wheel traveling around a bed, and also wheels in which the tread-surface or flange is provided with roller-bearings.

33 This subclass is indented under subclass 31.1. Railway-car wheels provided with a plurality of rim tread-surfaces.

34 This subclass is indented under subclass 31.1. Railway-car wheels the tread surfaces of which are integral with the wheel-body and the novelty of which resides in the specific form or shape of said tread-surfaces.

SEE OR SEARCH THIS CLASS, SUBCLASS:
30.1, for pneumatic-tire wheels which may include specific pneumatic-tire forms or shapes.

35 This subclass is indented under subclass 1. Bearing linings or bushings for railway-car wheels of the type which turn loosely upon their axles.

36.1 AXLE:
This subclass is indented under the class definition. Device comprising a shaft upon which a railway-vehicle wheel is supported for rotation (i.e., a railway-car axle).

SEE OR SEARCH THIS CLASS, SUBCLASS:
43, for means for attaching and maintaining a railway-vehicle wheel on a railway-car axle for rotation with the axle.
44+, for means for attaching and maintaining a railway-vehicle wheel on a railway-car axle so as to adapt it to rotate independently of the axle.

SEE OR SEARCH CLASS:
105, Railway Rolling Stock, subclasses 218.1+ for railway vehicle truck axle box mountings.
301, Land Vehicles: Wheels and Axles, subclasses 124.1+ for axles under that class definition.
384, Bearings, appropriate subclasses for bearings which may support a railway-car axle. See, for example, subclass 459 for radial, railway car journal bearings; subclasses 594 and 595+ for railway truck thrust bearings. See section 2, Note (1) and the Search Notes under the class definition of Class 384 with regard to the lines between Classes 384 and 295.
464, Rotary Shafts, Gudgeons, Housings, and Flexible Couplings for Rotary Shafts, subclasses 179+ for a rotary torque transmitting shaft.

37 This subclass is indented under subclass 36.1. Railway-car axles consisting of a stud-section inclosed in a sleeve-section and adapted to revolve therein, each section having a car-wheel secured to its outer end.

38 This subclass is indented under subclass 36.1. Railway-car axles divided into two sections, each carrying a car-wheel on the outer end thereof and having the inner ends journaled in a single fixed bearing between the wheels and adapted for revolution independent of each other.

39 This subclass is indented under subclass 36.1. Railway-car axles divided into sections and means not otherwise classified below for coupling the sections together and adapting them for revolution independent of each other.

40 This subclass is indented under subclass 39. Same as ... in which the coupling means consist of flanged elements surrounding the axle-sections and secured together by bolts passing through the flanges thereof.

41 This subclass is indented under subclass 36.1. Railway-car axles adapted to be secured directly to the car-body.

42 This subclass is indented under subclass 41. Brackets for mine-car axles adapted to surround the axle and support it directly from the car-body.

42.1 Positioned around or within co-extensive axle or housing by roller or ball bearing:
This subclass is indented under subclass 36.1. Device wherein the railway-vehicle wheel supporting shaft surrounds or is surrounded by a second shaft or shaft enclosure along its substantial length. The wheel supporting shaft and the second shaft or shaft enclosure are held and allowed to rotate relative to each other means for a support (bearing) between them which support contains spherical or cylindrical rotating elements which reduce friction.

(1) Note. A device comprising a mere journal bearing which encircles and supports a portion of a shaft is not included in this subclass.

(2) Note. A railway-car axle comprising a stud section enclosed and revolving within a sleeve section, each section having a car-wheel secured to its outer end, is not included in this subclass.

SEE OR SEARCH THIS CLASS, SUBCLASS:

37, for a railway-car axle comprising a stud section enclosed and revolving within a sleeve section, each section having a car-wheel secured to its outer end.

42.2 With specified end cap fastening means:
This subclass is indented under subclass 36.1. Device comprising, in particular, a stop member and means to secure the stop member to an end of the shaft.

(1) Note. The stop member usually maintains a bearing means in position on the axle.

(2) Note. Railway axle end-cap locking plates which prevent end-cap securement nuts or bolts from loosening are included in this subclass.

SEE OR SEARCH THIS CLASS, SUBCLASS:

49+, means for preventing end-cap securement nuts or bolts from loosening are included in this subclass.

SEE OR SEARCH CLASS:

411, Expanded, Threaded, Driven, Headed, Tool-Deformed, or Locked-Threaded Fastener, subclasses 81+ for threaded fastener locking means.

43 This subclass is indented under the class definition. Means for attaching and maintaining the car-wheel on the axle so as to adapt it to revolve with the axle.

SEE OR SEARCH CLASS:

403, Joints and Connections, appropriate subclasses, particularly subclasses 230+ for a joint between a wheel and axle which involves only so much wheel or axle structure as is necessary to effect the joint.

44 This subclass is indented under the class definition. Means for attaching and maintaining the car-wheel on the axle so as to adapt it to revolve independently of the axle and not otherwise classified below.

SEE OR SEARCH CLASS:

301, land Vehicle, Wheels and Axles, subclass 111.101 and indented subclasses.

403, Joints and Connections, appropriate subclasses particularly subclasses 230+ for a joint between a wheel or axle including only such structure as is necessary to effect the joint.

411, Expanded, Threaded, Driven, Headed, Tool-Deformed, or Locked-Threaded Fastener, subclasses 337+ for headed fasteners with securing elements; and

subclasses 511+ for securing elements, per se.

45 This subclass is indented under subclass 44. Means , in which the wheel is prevented from moving longitudinally of the axle by means of an overhanging ring or lip on the axle-bracket engaging an annular recess in the outer surface of the wheel-hub.

46 This subclass is indented under subclass 45. Means wherein the axle- bracket forms in combination with the hub- groove, a substantially circular annular recess in which roller-bearings are imposed.

47 This subclass is indented under subclass 44. Means , in which the wheel is prevented from moving longitudinally of the axle by means of rings, segmental collars, or roller-bearings in the wheel-hub engaging annular recesses in the car-axle.

48 This subclass is indented under subclass 47. Means wherein the longitudinal movement is prevented by a bolt or pin extending tangentially or radially into the axle-groove and providing a thrust-bearing for the wheel.

49 This subclass is indented under subclass 44. Means , in which the longitudinal movement of the wheel is prevented by an end-stop member not otherwise classified below, such as a nut, rigid collar, or cap provided on the axle and bearing against the outside surface of the wheel-hub.

SEE OR SEARCH THIS CLASS, SUBCLASS:

42.2, for specified axle end-cap fastening means.

50 This subclass is indented under subclass 49. Means , wherein the end stop member is held in place on the axle by means of a linch or cotter pin passing through the axle.

END